

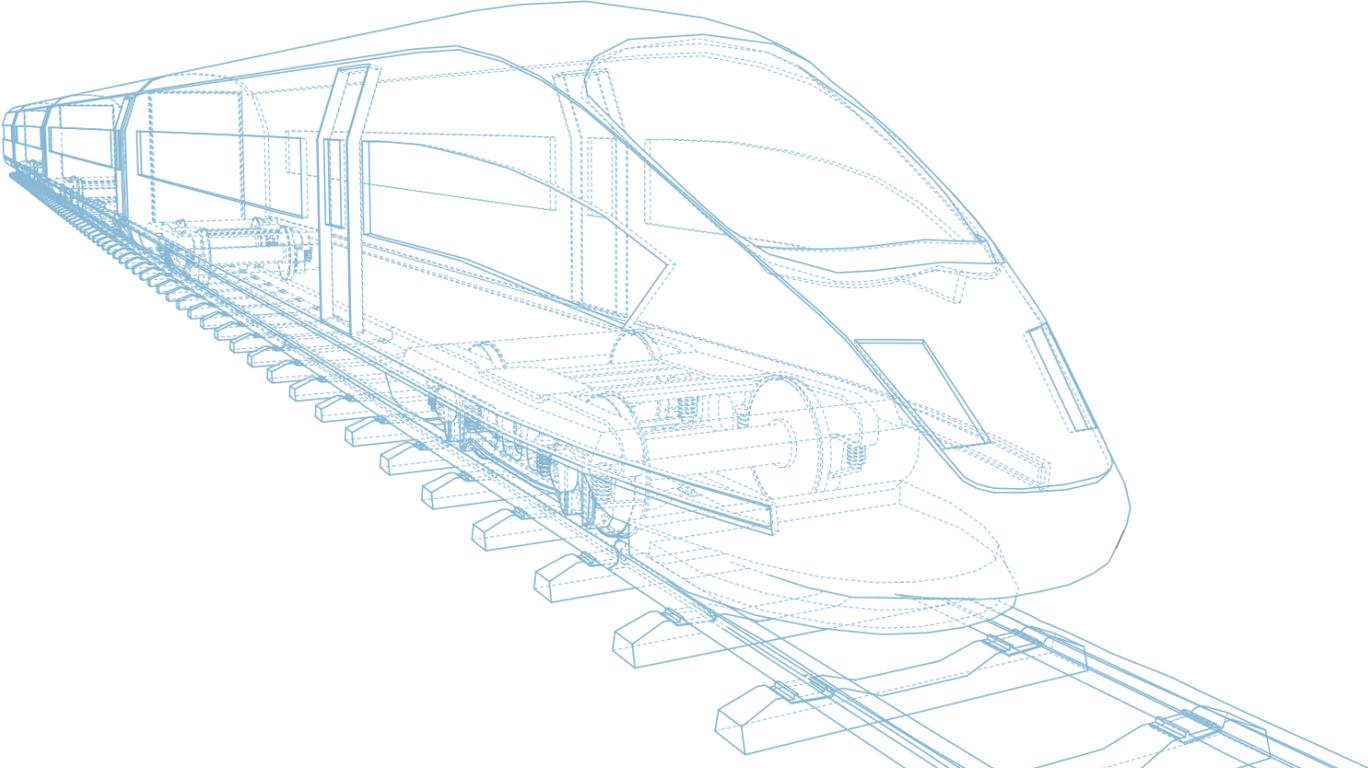


# Rail Service

The power of transmission

# Service for every need

As an OEM or railway operator you are looking for perfect service partners who can offer a comprehensive service. A good service is customized, complete and above all, trustworthy. Therefore, rely on IGW, a global leader in railway drive systems since 1993 and an ideal partner who offers you a range of services for railway drive systems, couplings and complete wheelsets.



## AFTERMARKET RAIL

01

REPAIR, MAINTENANCE & OVERHAULS

*for gearboxes, couplings & complete wheelsets*

02

SPARE PART SUPPLY

*for gearboxes & couplings*

03

RE-ENGINEERING

*of gearboxes & couplings*

04

ASSEMBLY AND TEST TRAINING

*for service intervals and main overhaul of your gearboxes & couplings*

05

ADDITIONAL ACTIVITIES

*Spare couplings, RFU parts, re-ratio-projects....*

# 01 REPAIR, MAINTENANCE AND OVERHAUL

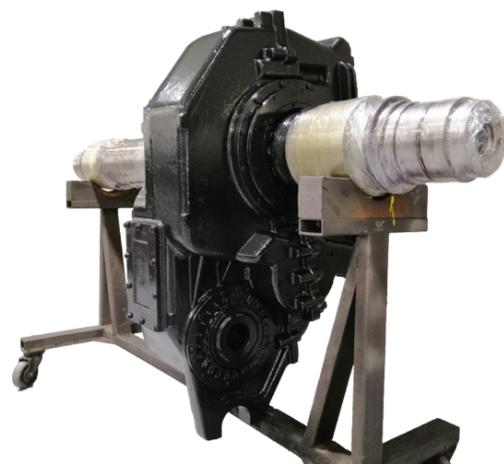
We are available for any possible aftermarket activities to be executed on gearboxes made by us or other companies. Even overhaul of complete wheelsets lies within our capabilities which will make your life as customer easier. Below you can find more in detail what we can do for you:

- Support on site main overhauls as well as service and maintenance intervals.
- Support overhaul and repair in our facilities and service centres
- Provide service contracts over the total gearbox lifetime
- Provide customized test requirements
- Provide expertise reporting after trouble shooting
- Embed our cooperation of universities and specialized investigation lab's in case deeper analyses are needed

BEFORE



AFTER



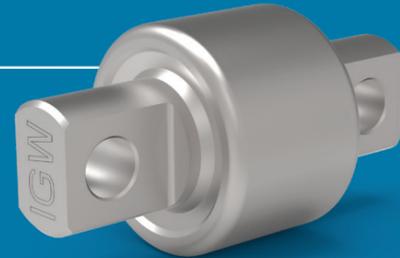
# 02 SPARE PART SUPPLY

We can deliver spare parts of all kinds for rail gearbox applications, being:

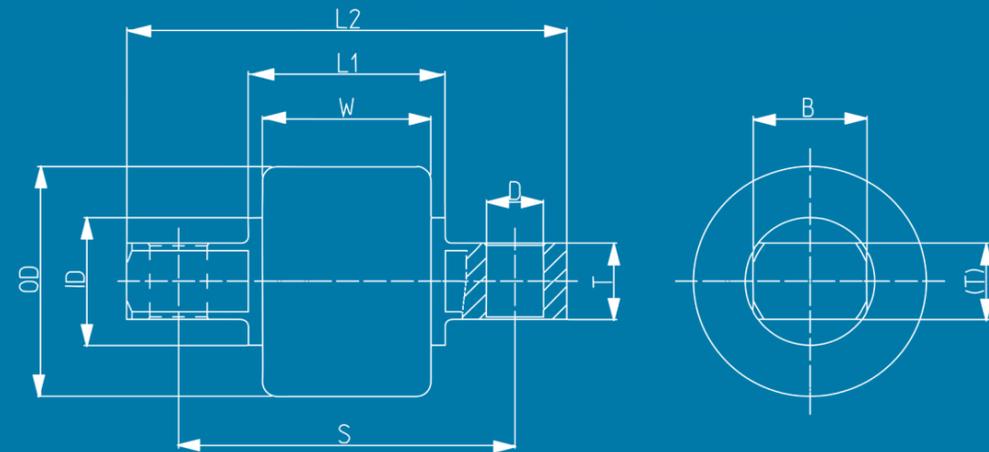
- Gears
- Cases ( housings)
- Labyrinths,
- Covers,
- Bearings,
- Bearing bushes,
- Fasteners, etc...

We develop several components in house

## Spherolastic bearings



Spherolager dimensions		Shaft dimensions			Stiffness
OD [mm]	W [mm]	S [mm]	T [mm]	L2 [mm]	
70	48	110	30	150	70 ± 15%
80	65	120	30	160	115 ± 15%
90	65	120	30	156	80 ± 15%
90	65	130	30	170	85 ± 15%
90	65	152	30	190	85 ± 15%
110	80	150	42	200	150 ± 15%



## Tappered roller bearings

Verified in operation since 2010 - some of our references

Project	Customer	Quantity
Caracas Metro Line 1	CAF	486
Shanghai Metro Lines 11 & 13	Siemens	112
Hyderabad Metro Phase I	Hyundai Rotem	456
Dongguan Metro Line 2	NPRT	610
Ankara Metro Lines 1, 2 & 3	CRRC ZELC	344
Wellington Matangi EMU	Hyundai Rotem	797
Electric Train Service KTM Class 93	CRRC ZELC	160
Hong Kong Shatin to Central Link Phase II	Hyundai Rotem	888
Changsha Metro Line 1	CRRC ZELC	800
São Paulo Commuter EMU	Hyundai Rotem	630
Guangzhou Metro Line 7 / Zhengzhou Metro Line 2	CRRC ZELC	324
Salvador Metro Lines 1 & 2	Hyundai Rotem	400
Guangzhou Metro Line 9	CRRC ZELC	355
Izmir Metro	CRRC Tangshan	698
KVMRT SSP Line (Malaysia)	Hyundai Rotem	256
JPJ 15	Skoda	372
Singapore	SMRT	720

Total number of delivered tapered roller bearings

**13.500**

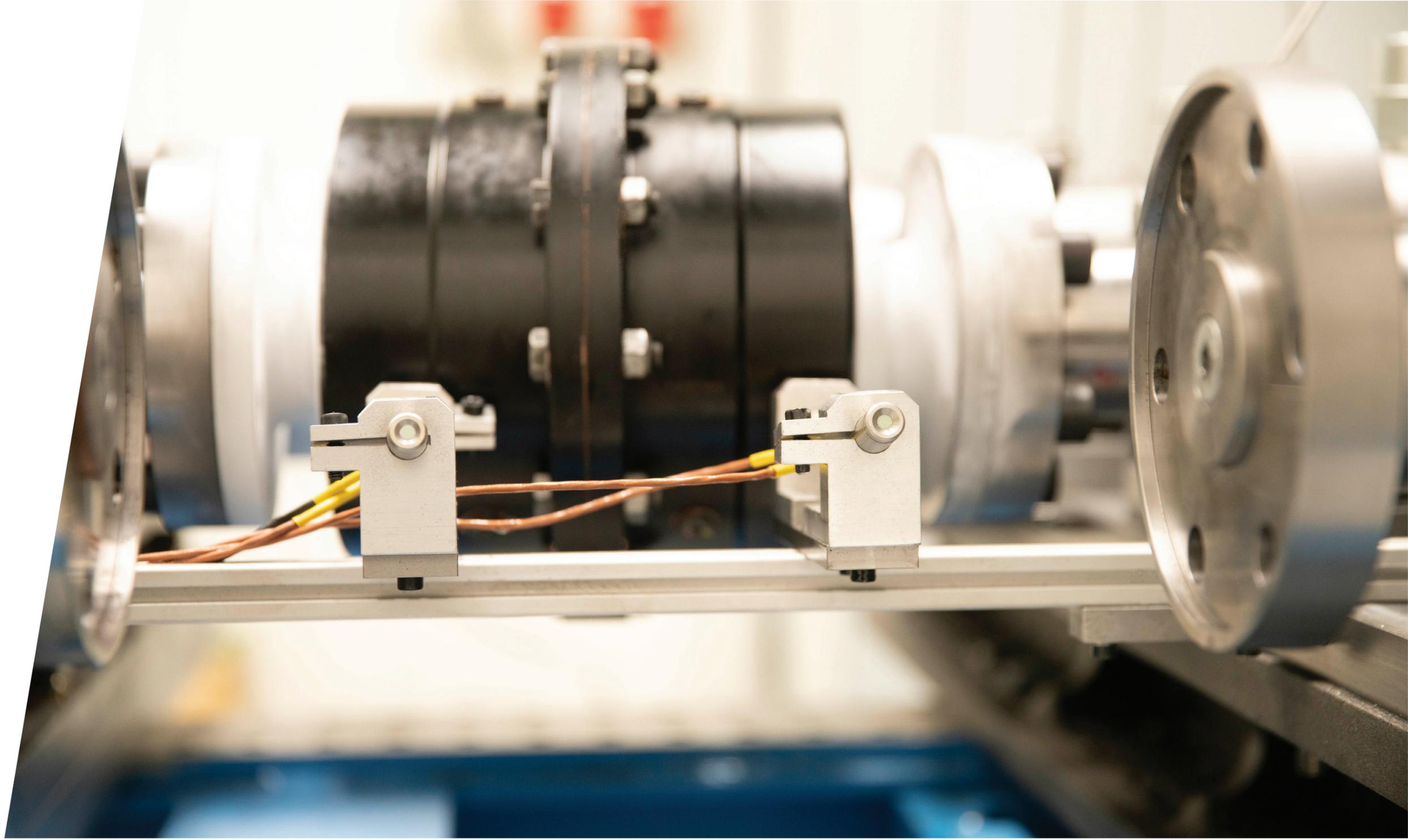
IGW couplings  
Take a look at our coupling brochure to learn more about it



## 03 RE-ENGINEERING

We have the ability to reengineer any gearboxes or couplings in order to refurbish your running fleet, help with trouble shooting or prepare repair actions.

During the reengineering you can count on us that we will always design and improve the gearbox design based upon the build in space and your technical specifications.



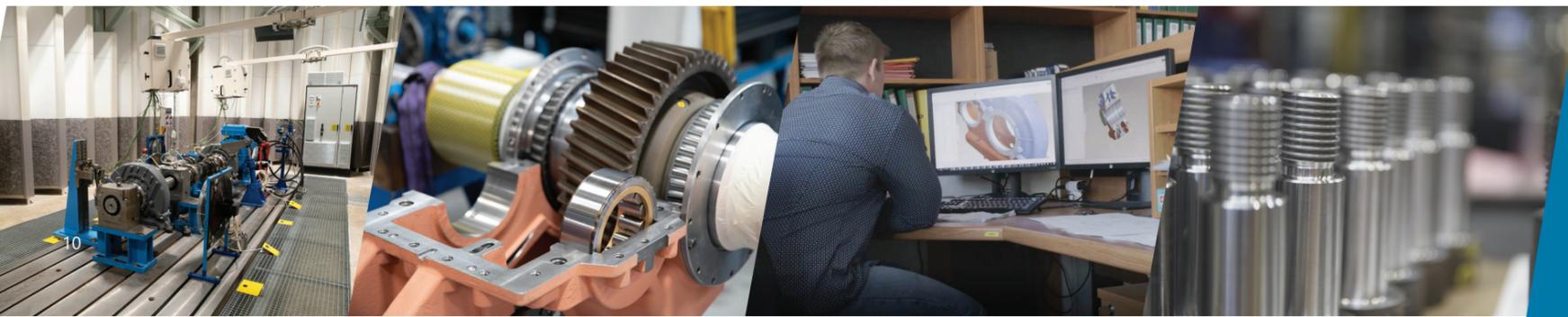
# 04 ASSEMBLY AND TEST TRAINING

Assembly and test training for service intervals and main overhaul can be provided to customers. Mostly the by IGW foreseen maintenance manual is the guide line.

If needed, we can always supply special instruction manuals and/or power point presentations. After commercial agreement, we can arrange the training in other languages than English.

# 05 ADDITIONAL AFTERMARKET ACTIVITIES

- We can supply our IGW couplings – replacing existing couplings from IGW or from other suppliers.
- Our RFU parts can be Implemented (i.e. bearings, rubber –metal elements)
- We can lead your re-ratio –projects: as old rolling stock sometimes need an upgrade and you will need to use another motor, we will be able to help implementing a new gear -ratio in an existing gearbox.
- Providing field tests and condition monitoring lies within our possibilities
- We can supply test benches for routine tests
- We can manage your consignment stock agreements



# A proven track record

For many years, we are providing drive solutions to the railway industry and are a trustworthy partner, who can offer you everything you need for service. So far, we have manufactured more than 100,000 gearboxes for more than 300 projects and did more than 5,500 overhauls globally. Many industry-leading customers have placed their trust in our expertise, service, state-of-the-art capabilities and the quality of our products.

Project	Year	Quantity	Project	Year	Quantity
Oslo Gardermoen Airport Express	2003~2007	225	Guangzhou Line 3 Overhaul	2017	668
CHE 790 (Sleeper Cars)	2012~2013 2016~2020	800 800	Beijing Line 2 Overhaul	2017	66
CRH 796 (Sleeper Cars)	2013~2014	800	Guangzhou Line 2&8 Overhaul	2018	432
CRH 797 (Sleeper Cars)	2014~2017	400	Beijing Line 2 Overhaul	2018	93
Locomotive ER20CF Lithuania	2014~2016~2021	556	Beijing Line 2 Overhaul	2019	81
CRH 799 (Sleeper Cars)	2015~2016	800	Shenzhen Line 1 Overhaul	2020	448
Paris Nouvelle Automotrice Transilien	2014~2015	14	Beijing Line 2 Overhaul	2020	50
London Sub Surface Lines	2014~2015	66	Non-IGW (VAR200) Overhaul	2020	8
TCDD E68000 Locomotives	2015	25	Seattle/Phoenix gearbox overhaul	2020~2021	300
London Victoria Line ext.	2014~2016	60	Ukraine EMU High speed	2016~2018	272
Combino/Aventra Tram	2015	72	Intercity Express EMU (queensland)	2015~2016	240
Jakarta EMU	2016~2020	80	Bremen Regio-S-Bahn	2016~2022	8 + opt.236
Non-IGW (FLIRT SZH595)	2017~2020	16	Seattle Central Link	2015~2016	300
Non-IGW (Marseille)	2017~2020	108	Bangkok Desiro Airport Rail Link	2018~2020	96

## In good company

We are a brand of the BMT Group, an industrial, family-owned holding company, with various global market leaders among its subsidiary companies (e.g. BMT Aerospace, VCST & OMCO). The shared know-how within the BMT Group and our commitment to innovation makes us a powerful force in the gear system market.

[www.igwpower.com](http://www.igwpower.com)



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